

The Effects of Gender Differences and Setting
On Interpersonal Space with Same-Sex and Mixed Dyads

An Honors Thesis (HONRS 499)

by

Anjanette Muehl and Deborah Hawkins

Dr. Ronald Goodnight

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Ball State University

Muncie, Indiana

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Interpersonal Space

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Running head: THE EFFECTS OF GENDER DIFFERENCES AND SETTING

Abstract

Gender and setting influences on invasion of space of interacting dyads were studied. One hundred eighty people (ninety males, ninety females), appearing to be between the ages of seventeen and twenty-five, were observed in two natural settings (a residential setting and a recreational setting) either walking through or around a conversing dyad. The dyads were either male-male, male-female, or female-female. The hypothesis was that the male-female dyad would be intruded upon most; that females would, in general, intrude more than males; and that intrusions would occur in the recreational setting more often than in the residential setting. The results showed one main effect, dyad type, as the only influential variable.

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Few people have not experienced a situation in which their personal space, an area around themselves out of which others must stay, has been invaded. As well, most people have invaded the personal space of others. Personal space invasion appears to cause feelings of being uncomfortable and insecure in both the intruder and the one whose space is being invaded (Hendricks & Bootzin, 1976; Walker & Borden, 1976). There are several factors that influence this invasion of walking through two people talking. Sex, race, and status of those being invaded seems quite important (Brown, 1981; Walker & Borden, 1976) as well as the sex of the intruder (Buchanan, Juhnke, & Goldman, 1976).

Previous studies have found that sex has a great influence on whether an invasion of personal space will occur. Walker and Borden (1976) found that significantly more people walked through mixed dyads than through male-male or female-female dyads, whose rates were not significantly different. They also found that males and females were equally likely to invade interacting dyads, and there was no support found for the idea that males and females tend to invade dyads of their own sex.

Buchanan et al. (1976) approached the study of sex factors in a different way by conducting a field study in elevators, where either a male or female occupied the floor selection panels. They found that people would avoid space invasion, if possible. However, if there was no choice, males preferred to invade female space rather than male, and females showed no significant preference. They concluded that males had a larger personal space zone than females did.

Hendricks and Bootzin (1976) found that people felt more discomfort when approaching the opposite sex than when approaching the same sex. Yet both sexes approached the opposite sex up to the same distance as they approached the same sex.

Walker and Borden (1976) found that those with high status, where status is defined by how one dresses, were interrupted less. There also was an interaction between the status and the sex of the dyad. Female-female pairs were intruded upon the most, followed by male-female and male-male, respectively. Under this high status condition, female pedestrians invaded more, but the pedestrian's sex did not interact with any other variables. Interestingly, Davis and Lennon (1983) found that if one of the pair is pregnant, there will be fewer intrusions, as well.

With regards to setting, Hewitt and Henley (1987) found no significant effects or interactions involving location. However, most studies involve only one location.

In this experiment, the effects of differences in both gender and setting were studied. Based on previous findings, it is predicted that the mixed dyad will be intruded upon most, followed by female-female and male-male, respectively. It is also predicted that males will intrude more often on the female-female dyad than on the other dyads, while females will intrude more often on the male-female and female-female dyads. Overall, females will intrude more often than males. This is based on the idea that males have larger personal space areas than females (Buchanan et al., 1976), and therefore, they will avoid getting as close to a male as to a female. That way their personal spaces will not cross. Furthermore, it is also predicted that less intrusions, in general, will take place in a residential setting versus a recreational setting due to the more active and competitive environment of the latter.

Method

Subjects

One hundred eighty (ninety males and ninety females) people appearing between the ages of seventeen

and twenty-five were observed for this study. It did not matter whether they walked alone or with others.

Procedure

The two settings chosen for this study were the Botsford-Swinford dormitory (residential) and the Health and Physical Activity Building (HP) on Ball State University's campus. Two female confederates and two male confederates combined to form three Caucasian dyads: male-male, female-female, and male-female. Each dyad took turns standing in conversation with one member standing against the wall of the hallway and with the other member standing in the midpoint of the width of the hallway. Both hallways were approximately eight feet wide. The pair was facing each other, was dressed in casual clothing, and made no abrupt movements or loud utterances.

Insert Figure 1 about here

Specifically, the locations were the hallway that leads to the Botsford side of the Botsford-Swinford dormitory and the hallway that overlooks the racketball courts in HP.

An observer recorded the number of people who walked around the conversing dyad and the number who

walked through the dyad. For each of the three dyad combinations in the dorm, the first fifteen males and first fifteen females that passed were observed. This same procedure was carried out in HP. The observations took place in the late afternoon on a weekday.

Results

A 3X2X2 (Dyad-type X Subject-gender X Setting) ANOVA was calculated and indicated no interactions and one significant main effect for dyad-type: $F(2, 168) = 3.5$, $p = .03$.

Insert Table 1 about here

In other words, the make-up of the dyads was the only variable that influenced whether subjects walked through or around. The mean for subjects who walked through the female-female dyad was .02. The mean for subjects who walked through the male-male dyad was .13. The mean for subjects who walked through the mixed dyad was .05.

Insert Table 2 about here

The multiple regression of walking through or around on all independent variables together produced a multiple R of .24. The multiple R squared was .06, indicating all independent variables together accounted

for 6% of the variance in walking through or around. This explained amount was nonsignificant.

Discussion

The results failed to support the hypothesis. Based on the Walker and Borden (1976) study, it was predicted that the male-female dyad would be invaded the most when, in fact, the male-male dyad was invaded the most. Furthermore, Buchanan et al. (1976) found that males invaded female space more often than they did male space whereas this study found the sex of the subject nonsignificant.

The predictions regarding setting were also unsupported by these findings. One possible explanation may be that in this experiment, the confederates stood to one side of the hallway, giving subjects only two choices, one around and one through. Perhaps, if they had stood in the middle of the hallway and allowed three choices, two around and one through, there would have been different results. Also, this study did not distinguish between walking alone or with someone else, as did the Walker and Borden (1976) study, which only observed those alone. Perhaps, there was not enough room for all to go around or all go through, and so,

the subjects did the opposite of what they might have done alone. This study was done inside. Perhaps if it had been done outside, like the Walker and Borden (1976) study, there would have been different results.

Another influence might be the personal characteristics of the confederates or the subjects. First of all, status of the confederates may account for the results of no significance. Walker and Borden (1976) did find that high status or the way that the dyads dress does affect whether the dyad is invaded or not. Furthermore, perhaps the setting did not influence the results because both locations were hallways that did not necessarily guarantee the presence of that setting's normal occupants.

Further research needs to be done in these areas due to these issues. For example, age, culture, and race, are additional issues that need to be studied. Older people may be more or less aware and careful about walking through people conversing. Culture may look at personal space differently. Race has been studied and has been found to influence space invasion of interacting dyads. Brown (1981) found that pedestrians will walk through Black dyads more than White dyads. The interactions of all of these variables are possible ideas for future research.

Research in this area can only serve to enlighten society and to serve as an aid to help explain how and why people behave in certain ways towards members of the opposite and same sex. Gender differences have always been a puzzlement, and areas such as business, interpersonal relationships, and communication with others can only benefit from this type of research.

References

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Table 1

Means of Total Number of Subjects Who Walked Through
the Dyads

Dyad-type			
	<u>Female-Female</u>	<u>Male-Male</u>	<u>Male-Female</u>
	.02	.13	.05
Subject			
	<u>Female</u>	<u>Male</u>	
	.06	.08	
Setting			
	<u>HP</u>	<u>Botsford-Swinford</u>	
	.10	.03	

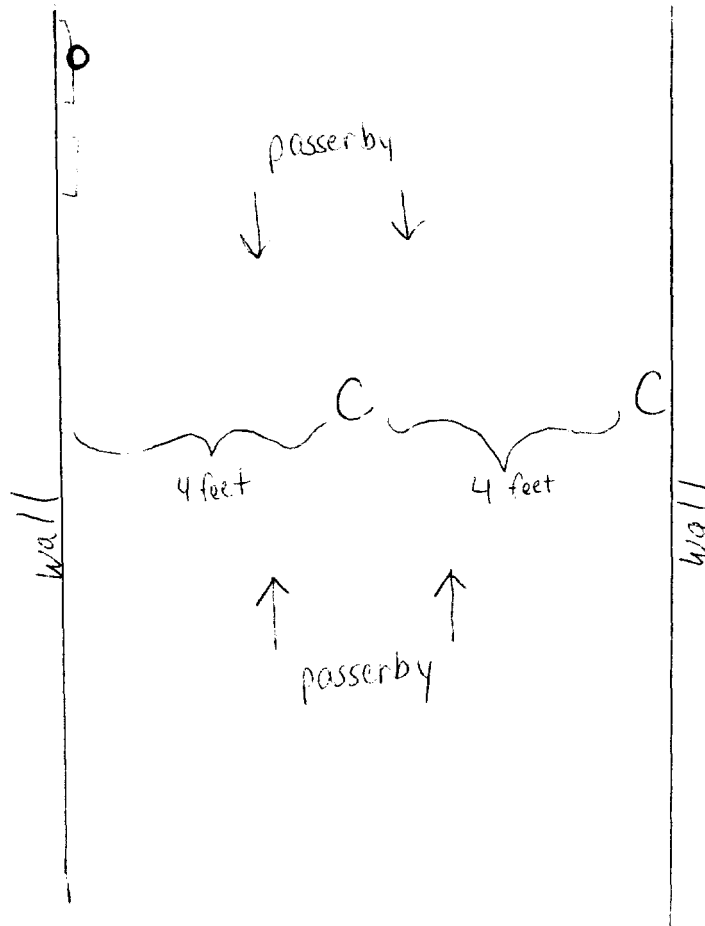
Table 2

Analysis of Variance

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Sig of F
Main Effects	.656	4	.164	2.682	.033
Dyad-type	.433	2	.217	3.545	.031
Subject-gender	.022	1	.022	.364	.547
Setting	.2000	1	.200	3.273	.072
2-way Interactions	.267	5	.053	.873	.501
Dyad-type X Subject-gender	.078	2	.039	.636	.530
Dyad-type X Setting	.100	2	.050	.818	.443
Subject-gender X Setting	.089	1	.089	1.455	.229
3-way Interactions	.011	2	.006	.091	.913
Dyad-type X Subject-gender X Setting	.011	2	.006	.091	.913
Explained	.933	11	.085	1.388	.182
Residual	10.267	168	.061		
Total	11.200	179	.063		

Figure Caption

Figure 1. Positioning of Dyads



O - Observers
C - Confederates

Purpose

We chose to do this experiment for our Honors Thesis because we had conducted a similar experiment a few years ago and wished to alter the study in terms of additional variables and methodology. In altering and expanding this study, we hoped to find interesting differences in types of settings and in gender differences as well. We hoped that these changes would elicit findings more consistent with other research.

In working with our advisor, Dr. Goodnight, we truly enjoyed our Honors Thesis experience and wish to thank him for the great wealth of time and assistance given us. We would also like to thank Dr. David Perkins for his assistance with the statistical computations.